

Title (en)
THIOL-DERIVATIZED NUCLEOSIDES AND OLIGONUCLEOSIDES

Title (de)
NUKLEOSIDE UND OLIGONUKLEOSIDE MIT THIOL-GRUPPE

Title (fr)
NUCLEOSIDES ET OLIGONUCLEOSIDES A FONCTION(S) THIOL

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Application
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Abstract (en)
[origin: US5578718A] Nucleosides and linked nucleosides functionalized to include alkylthiol chemical functionality at ribofuranosyl positions, nucleosidic base positions, or on internucleoside linkages. In certain embodiments, the compounds of the invention further include steroids, reporter molecules, reporter enzymes, lipophilic molecules, peptides or proteins attached to the nucleosides through the alkylthio group.

IPC 1-7
A61K 31/70; **C07H 19/00**; **C07H 21/00**; **C07J 51/00**; **C07J 43/00**

IPC 8 full level
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Citation (search report)
• [Y] WO 9114696 A1 19911003 - GILEAD SCIENCES INC [US]
• [Y] WO 9115500 A1 19911017 - DU PONT [US]
• [Y] WO 9106556 A1 19910516 - GILEAD SCIENCES INC [US]
• [YX] WO 8902931 A1 19890406 - CETUS CORP [US]
• [Y] EP 0407816 A2 19910116 - ABBOTT LAB [US]
• [Y] EP 0423839 A2 19910424 - CHIRON CORP [US]
• [Y] WO 9110671 A1 19910725 - ISIS PHARMACEUTICALS INC [US]
• [Y] WO 9307883 A1 19930429 - ISIS PHARMACEUTICALS INC [US]
• [X] B.G.DE LA TORRE ET AL.: "Use of a Base-Labile Protected Derivative of 6-Mercaptohexanol for the Preparation of Oligonucleotides Containing a Thiol Group at the 5'-End", NUCLEOSIDES AND NUCLEOTIDES, vol. 12, no. 9, 1993, pages 993 - 1005, XP002150670
• [Y] J.T.GOODWIN ET AL.: "Incorporation of Alkylthiol Chains at C-5 of deoxyuridine.", TETRAHEDRON LETTERS., vol. 34, no. 35, 1993, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM., NL, pages 5549 - 5552, XP002150671, ISSN: 0040-4039
• [X] J.P.COLLMAN ET AL.: "'Mercaptan-Tail' Porphyrins : Synthetic Analogues for the Active Site of Cytochrome P-450.", JOURNAL OF THE AMERICAN CHEMICAL SOCIETY., vol. 104, no. 5, 1982, AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC., US, pages 1391 - 1403, XP000946892, ISSN: 0002-7863
• [X] B.A.CONNOLLY: "Chemical Synthesis of Oligonucleotides Containing a Free Sulfhydryl Group and Subsequent Attachment of Thiol Specific Probes.", NUCLEIC ACIDS RESEARCH., vol. 13, no. 12, 1985, OXFORD UNIVERSITY PRESS, SURREY., GB, pages 4485 - 4502, XP000877196, ISSN: 0305-1048
• [XA] W.BANNWARTH ET AL.: "110. A New Combined Purification / Phosphorylation Procedure for Oligodeoxynucleotides.", HELVETICA CHIMICA ACTA, vol. 73, 1990, pages 1139 - 1147, XP002150672
• [X] N.D.SINHA ET AL.: "The Preparation and Application of Functionalised Synthetic Oligonucleotides : III. Use of H-Phosphonate Derivatives of Protected Amino-Hexanol and Mercapto-Propanolol -Hexanol.", NUCLEIC ACIDS RESEARCH., vol. 16, no. 6, 1988, OXFORD UNIVERSITY PRESS, SURREY., GB, pages 2659 - 2669, XP002150673, ISSN: 0305-1048
• [PX] M.MANOCHARAN ET AL.: "A 2'-O-Thiol Tether in the Ribose Moiety of Nucleic Acids for Conjugation Chemistry", GENE, vol. 149, 1994, pages 147 - 156, XP002049798
• [PX] M.MANOCHARAN ET AL.: "Introduction of a Lipophilic Thioether Tether in the Minor Groove of Nucleic Acids for Antisense Applications.", BIOORGANIC AND MEDICINAL CHEMISTRY LETTERS, vol. 3, no. 12, 1993, pages 2765 - 2770, XP002050155

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